

REMARKS

The Final Office Action continues to base claim rejections over cited art upon multiple references to allegedly “inherent” structures and functionality that are neither supported in the cited references nor evidenced in the Office Action. The rejections also continue to rely upon untenable assertions of what the cited reference “can further comprise” when the reference clearly does not disclose the indicated limitations as pointed out in the responses of record, which have been ignored and unaddressed in the instant Office Action. In addition, the Section 112(1) rejections are improper because the plain language in the specification clearly supports the claims and meets Section 112(1) requirements, and the Section 112(2) rejections improperly place requirements for describing additional limitations that are not claimed (*i.e.*, to improperly limit structure). These and other matters are more particularly addressed in the following discussion. In addition, as the Final Office Action has ignored or misinterpreted the rejections and Applicant’s previous response filed on May 27, 2008, Applicant fully incorporates the remarks made in this previous response.

The Office Action dated August 29, 2008 indicated that the drawings stand objected to, and listed the following rejections: claims 11 and 14 stand rejected under 35 U.S.C. § 112(1); claims 1-12 stand rejected under 35 U.S.C. § 112(2); claims 1-3, and 11-15 stand rejected under 35 U.S.C. § 102(b) or under 35 U.S.C. § 103(a) over Akiyama (US Patent Pub. No. 2002/0043699, hereinafter the ‘699 publication); claims 4-8 and 10 stand rejected under 35 U.S.C. § 103(a) over the ‘699 publication in view of William (US Patent No. 5,374,843) and/or Letavic (US Patent No. 6,127,703) or in the alternative, over Letavic in view of the Akiyama and/or William references. Applicant traverses the objections and rejections, and does not acquiesce to any rejection or averment in this Office Action unless Applicant expressly indicates otherwise.

The Section 102 and 103 rejections are improper because they rely upon multiple assertions of how the references “can naturally function” or what the structures “inherently” do without showing any evidence supporting these assertions, in a manner contrary to the M.P.E.P. and relevant law. That is, such unsupported allegations of inherent or natural structure or functions are improper without a showing that the structure or functions are *necessarily* present. This is consistent with Applicant’s

traversals of record, in response to which the Examiner has failed to present any evidence in support of the alleged inherency.

The Section 102 and 103 rejections are also improper because the '699 publication, upon which all rejections rely, does not disclose a field plate that forms "a linear lateral electric field distribution" consistent with independent claim 1 (and, accordingly, in claims 2-10 that depend therefrom). For a better understanding of this technical issue, the Examiner is encouraged to review Applicant's specification, particularly in connection with paragraph 16 of the USPTO published version which states:

Because of the isolation, unlike in the prior art where the voltage throughout the whole field plate is the same as the high voltage +Vs of the source region, the voltage in the field plate of the present invention is linearly distributed laterally. In other words, it drops linearly from the same high voltage +Vs of the source region 42 at its most left region (i.e., the region 52a) to a much lower value at the end of the field plate 52, i.e., at its most right region. Therefore, the electric field enhancement that existed in the prior art at the end of the field plate is eliminated.

In addition, the conductive regions of the '669 reference cannot "inherently linearly distribute a voltage" as suggested in the Office Action because the cited portions involve a field plate that has a gate at both ends and thus cannot affect the claimed linear lateral electric field distribution. Moreover, the Office Action's assertions of what the '699 publication "can further comprise" at page 7 simply fails to show teaching or suggestion of the claimed invention as required under Section 103. The response to arguments also relies upon various assertions of how the cited reference can "inherently function" without providing any evidence supporting the allegations of inherency. The response to arguments further improperly indicates that the structure is "substantially (sic) same as that of the instant invention" while ignoring Applicant's remarks, consistent with the above, demonstrating that the '699 publication cannot function as asserted (due to its dual gates on opposing ends of the asserted field plate).

Applicant further traverses the Section 102/103 rejections over the '699 publication, because the Office Action's continued assertion that replacing the cited reference's non-metal material with metallic material is unsupported, contrary to the M.P.E.P. and relevant law. The Office Action has provided no motivation for such a

replacement and has failed to cite evidence in support of or even describe how the cited references could function after replacing its indicated material as suggested.

As all of the claim rejections rely upon the teachings in the '699 publication, which does not provide correspondence to claim 1 as discussed above, Applicant submits that all claim rejections are improper and should be removed.

The Section 112(1) rejection of claim 11 is improper because it is based upon a misunderstanding of electrical coupling (*e.g.*, capacitive coupling) and Applicant's disclosure. As generally described throughout the specification and clearly exemplified in FIG. 1 and described at paragraph 16, the indicated "field plate" arrangement includes a plurality of metallic segments that apply a distributed electric field as facilitated by dielectric material between the segments, which cause the voltage to be different at different portions of the field plate. For instance, the voltage throughout the field plate arrangement is not the same as would be, for example, if the plate was contiguous.

Applicant further traverses the Section 103 rejection of claims 4-8 and 10 in view of the '703 reference as a primary reference, insofar as understood, because the rejection has not stated where the '703 reference and various secondary references teach or suggest all of the claim limitations. For instance, the Office Action fails to assert any correspondence to limitations including those directed to a silicon-rich nitride layer, another dielectric layer, a linearly-graded charge profile, or to specific conductivity types. Applicant therefore submits that the rejection is therefore improper and requests that the rejection be removed.

In addition to the above, the Section 102 and 103 rejections are confusing because they do not specify which combination of references and their respective teachings are being asserted against which claim limitations. Specifically, the Office Action appears to have combined different rejections under Section 102 and 103 together, and under 103 with different primary/secondary reference combinations together, in a manner that is confusing and contrary to the M.P.E.P. In addition, to the extent Applicant can understand the Section 103 rejection of claims 4-8 and 10 over the '703 reference in view of the '699 publication and/or the '843 reference, the rejection does not comply with Section 103 because it fails to cite teaching or suggestion of all claim limitations and

explain how the references are being combined. Applicant therefore submits that these rejections are also improper for these reasons.

The Section 112(1) rejection of claim 14 is also improper because it is unclear, confusing and based upon a misunderstood assertion regarding the operation of the claimed structure that is neither claimed nor consistent with the claim limitations. The rejection states that the limitations “may imply that the voltage/potential inside the recited lateral drift region is non-linearly distributed, given the derivative relationship between the field strength and the potential.” Applicant is unclear as to how the Examiner’s assertion that there must be a derivative relationship and/or how that would affect the claimed structure (*i.e.*, the Applicant has not claimed a linear voltage distribution inside the drift region), and therefore submits that the rejection is unclear and confusing. Notwithstanding this lack of clarity, Applicant submits that the Specification clearly describes examples involving such a linear field distribution in a drift region, as effected via voltage application by an adjacent field plate arrangement. For instance, referring to FIG. 1, as the various field plate regions (*e.g.*, 52a, 54, 52b) are subjected to a distributed voltage, the respective field applied to the underlying lateral drift region 32 can be linear as claimed. This is consistent with the discussion at paragraphs 0018 and 0020.

As consistent with the above discussion, Applicant believes that the Specification provides clear examples that are easy to understand, and accordingly meets the requirements of Section 112(1). Should the Examiner have any remaining questions, a telephone call to the undersigned is invited.

The Section 112(2) rejections are improper because the Office Action’s indicated requirement that claim 1 limit the application of its electric field goes beyond the requirements of Section 112(2). The Office Action’s requirement that the Applicant clarify “in which region the recited linear lateral electric field distribution is definitely formed” is improper because the claims are not so limited. Moreover, the specification describes clear examples to which the claim may apply. Such a lateral field may relate to different regions, such as described at paragraph 0018 (where the lateral drift region 32 has “a linearly-graded charge profile” and the field plate may also have “a lateral electric field distribute or profile that exactly follows the electric field in the SOI drift region 32”). In this regard, Applicant believes that the Office Action’s suggestion to claim the

definite location of the field is improper. Furthermore, the Office Action's indication that it is unclear as to "whether it is the potential or it is the field that is linearly distributed" is confusing because the claim clearly recites forming "a linear lateral electric field distribution" in a manner consistent with the Specification and Section 112(2). Applicant therefore requests that the Section 112(2) rejections be removed, and further invites the Examiner to telephone the undersigned, should any confusion remain.

Regarding the objection to the drawings, the indication that "[i]n claims 1 and 2, the boundary between the regions 46 and 34 is not shown" is confusing because it is unclear as to how any boundary in the claims is relevant to the drawings, and further because claims 1 and 2 do not discuss any boundary. Reviewing the figures, regions 46 and 34 appear to lie adjacent one another and any boundary would appear to be between the regions; however, Applicant fails to understand what the objection is basing any such boundary and its showing upon. Regarding the reference character "48," Applicant has included a replacement drawing sheet with this response showing an amendment to figures 1 and 2 that remove the reference character as consistent with the Examiner's suggestion. In view of this replacement sheet and the above discussion, Applicant believes that the objections to the drawings have been overcome.

In view of the above, Applicant believes that each of the rejections/objections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063.

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Attachment—Replacement Drawing Sheet - 1 page